REMARKS

Applicants respectfully request reconsideration of the above referenced application in light of the Amendments submitted herewith and the Remarks that follow. Claims 1-5, 8-16, 19-24, 27-34 and 37 are now pending in this application.

In the Final Office Action dated March 17, 2009 (the "Final Office Action"), claims 31-34 and 37 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,336,103 to Baker (hereinafter referred to as "Baker"). Claims 1-30, 35 and 36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Baker.

Applicants respectfully traverse these rejections. The undersigned's Remarks are preceded by related comments in the Final Office Action, presented in small bold-faced type font.

A. Telephone interviews with Examiner Nguyen on May 12 and May 27, 2009

Applicants wish to again thank the Examiner for courteously granting the two telephone interviews with the undersigned on May 12 and May 27, 2009. During the course of the interviews, the undersigned explained to the Examiner the differences between Applicants' claimed invention and Baker, and the reasons why Baker does not anticipate nor render obvious Applicants' claimed invention. In the May 27, 2009 interview, the undersigned proposed and discussed with the Examiner a number of amendments to the pending claims. At the conclusion of the interview and after reviewing the submitted claims, Examiner Nguyen requested that Applicants file a Request for Continued Examination and an Amendment in response to the outstanding March 17, 2009 Office Action, including the amendments proposed to her during the interview, which after her instant review she found suitable to place the application in condition for allowance. The claims proposed to Examiner Nguyen with the addition of some of her suggestions presented to the undersigned during the interview are therefore submitted herewith.

B. Applicants' Remarks in Response to the March 17, 2009 Final Office Action

Applicants respectfully submit that the rejections in the March 17, 2009 Final Office Action are moot in view of the amendments submitted herewith. In any event, Applicants respectfully traverse these rejections and respectfully sustain the arguments previously submitted with respect to Baker. These arguments are hereby reproduced below.

Overview

Before addressing the specific arguments that have been presented in the Final Office Action to support the 102(e) and 103(a) rejections, Applicants respectfully submit that an overview of Applicants' invention, in comparison with Baker's invention may help to understand why these two inventions are different and why Applicants' claimed invention is neither anticipated nor rendered obvious by Baker.

Applicants' claimed invention:

Applicants' claimed invention is drawn to a method of identifying comparable instruments, in particular bonds. Such a tool is desirable when managing financial assets, such as when adjusting the components in a portfolio, pricing a new issue, analyzing the behavior of different market segments and implementing various trading strategies. In order to determine if certain instruments are comparable, their market behavior must be similar. Accordingly, Applicants' claimed method includes the steps of identifying a plurality of factors which are associated with the instruments, and determining a value for each of said plurality of factors for each of the instruments. Next, the method teaches to form a covariance matrix where the covariance matrix includes a weighting factor for each of the plurality of factors and where each of the weighting factors relates to an amount of market activity attributed to the corresponding one of the plurality of factors. Finally, the comparability of the at least two instruments is determined based on the values of factors for each of the securities and the covariance matrix.

Baker:

Baker is not concerned with a method of determining the comparability of at least two bonds or two instruments. Baker is concerned with selecting a portfolio of assets that achieve an optimum correlation of asset return to a selected standard financial index. To that effect, Baker builds the portfolio of assets by determining the weight percentages of these assets that achieve an optimum statistical correlation between the asset returns and the liability returns (Baker, abstract).

Baker and Applicants' claimed invention are drawn to different methods

Applicants respectfully submit that not only are Baker's and Applicants' objectives different, but also their methods are different. While some of the terms found in Applicants' claims are mentioned in Baker, the terms are used to articulate a different invention. It is fundamental that not only the individual claim terms be considered, but that the steps are borne into consideration when comparing Baker with Applicants' invention. As stated in the MPEP, "[t]o anticipate a claim, the reference must teach every element of the claim" (MPEP, § 2131) and "the claimed invention as a whole must be considered" (MPEP, § 2141.02). Baker uses some of the terms in Applicants' claims. However, Applicants' claimed invention comprises many other limitations, and each one of them must be considered and anticipated by Baker to support a 102(e) rejection. The present invention is not drawn to individual elements standing alone, but rather is directed to how these elements are put together in a method that consists of a number of steps that are executed to achieve a goal--establishing the comparability of two financial instruments.

Claim Rejections – 35 USC § 102

Claims 31-34 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker, U.S. Patent No. 6,336,103.

Regarding to claim 31, Baker discloses a method for determining the comparability of at least two instruments, wherein said method is implemented with a computer system comprising one ore more computer processors, said method comprising the steps of:

identifying with one of said one or more computer processors a plurality of factors associated with said at least two instruments (column 7, lines 30-40, the returns for each security in the prior periods, the weight in the portfolio of each security, market capitalization, trading volume, recent prices, specific identifiers and estimated bid/ask price spreads);

> **determining with one of said one or more computer processors a value for each of said plurality of factors for each of said at least two instruments (column 6, lines 1-60, value of the returns for each security, the weight in the portfolio of each security, etc.);**
>
> **forming with one of said one or more computer processors a covariance matrix, said covariance matrix including a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed to said corresponding one of said plurality of factors (figures 1A-18 and column 7, line 63-column 8, lines 35, calculating the covariance of each security with the target index);**
>
> **determining with one of said one or more computer processors the comparability of said at least two instruments based on said values for each of said at least two bonds and said covariance matrix (column 5, line 65-column 6, line 65, determining the covariance of stock 1 with stock 2)**

Office Action, pg. 4-5.

Applicants respectfully traverse the Final Office Action's rejection of claims 31-34 and 37. Applicants respectfully disagree with the statement in the Final Office Action that claims 31-34 and 37 are anticipated by Baker under 35 U.S.C. 102(e). To support a rejection under 35 U.S.C. § 102(e) the cited prior art of reference must disclose <u>each element</u> of the rejected claim(s) in the manner recited by the claim (MPEP, § 2131).

The Final Office Action states that Baker discloses "*identifying with one of said one or more computer processors a plurality of factors associated with said at least two instruments*" in column 7, lines 30-40 of Baker, as "the returns for each security in the prior periods, market capitalization, trading volume, recent prices, specific identifiers and estimated bi/ask price spreads" (Final Office Action, pg. 4).

Next, the Final Office Action states that Baker discloses "*determining with one of said one or more computer processors a value for each of said plurality of factors for each of said at least two instruments*" in column 6, lines 1-60 of Baker, as a "value of the returns for each security, the weight in the portfolio of each security, etc." (Final Office Action, pg. 4).

Applicants respectfully note that these two assertions are not consistent with each other. If the first assertion states that the factors identified correspond to the returns for each security in the prior periods, market capitalization, trading volume, recent prices, specific identifiers and estimated bi/ask price spreads in Baker, then in order for Baker to anticipate "*determining with one of said one or more computer processors a value for each of <u>said</u> plurality of factors for each of said at least two instruments*", as required by claim 31, Baker should teach determining a value for each of said

r*eturns for each security in the prior periods, market capitalization, trading volume, recent prices, specific identifiers and estimated bi/ask price spreads* (i.e., each of said plurality of factors). However, Baker does not disclose that neither in the lines cited nor anywhere else in the patent. Claim 31 requires that a value for a plurality of factors be determined. The Final Office Action states that Baker discloses the determination of two values: the value of the returns for each security and the weight in the portfolio of each security (Final Office Action, pg. 4). However, the "weight in the portfolio of each security" is not identified in the Final Office Action as one of the plurality of factors that is identified in the first step. Thus, Baker does not disclose that a value for a plurality of factors is determined.

Applicants respectfully submit that Baker discloses a number of weights for each security in the portfolio, not the weight of each one of the factors Baker refers to earlier in column 7, lines 30-40. Applicants respectfully submit that specifying a maximum and minimum percentage weight of the portfolio for each security is not determining a value for each of said r*eturns for each security in the prior periods, market capitalization, trading volume, recent prices, specific identifiers and estimated bi/ask price spreads* (i.e., each of said plurality of factors). Thus, this statement in the Final Office Action is inconsistent with the statement regarding the disclosure of the identification of a plurality of factors in Baker.

For at least the foregoing reasons, Applicants respectfully submit that Baker does not disclose at least the elements of independent claim 31 "*determining with one of said one or more computer processors a value for each of said plurality of factors for each of said at least two instruments*".

For similar reasons, the limitations "*forming with one of said one or more computer processors a covariance matrix, said covariance matrix including a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed to said corresponding one of said plurality of factors*" are not disclosed by Baker either.

The Final Office Action states that "*forming with one of said one or more computer processors a covariance matrix, said covariance matrix including a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity*

attributed to said corresponding one of said plurality of factors" is disclosed by Baker in Figures 1A-1B and in column 7, line 63-column 8, lines 35 as calculating the covariance of each security with the target index. However, neither of these portions cited in the Final Office Action, nor any other portion in Baker disclose at least "*a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed to said corresponding one of said plurality of factors*".

For reasons similar to those just presented, Baker does not disclose the limitations in Applicants' claim 31 "*determining with one of said one or more computer processors the comparability of said at least two instruments based on said values for each of said at least two bonds and said covariance matrix*", since *said covariance matrix* includes *a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed to said corresponding one of said plurality of factors*, as required by claim 31.

Thus, for at least the foregoing reasons, not only does Baker not anticipate claim 31, but it does not provide any guidance either to one of skill in the art on how to arrive at Applicants' claimed invention. Baker is not concerned with determining the comparability of at least two bonds as shown by Applicants, but with selecting a portfolio of assets that achieve an optimum correlation of asset return to a selected standard financial index.

Furthermore, Baker relies on historical data for his analysis:

> *The method uses historical returns for the plurality of stocks analyzed in order to calculate the resulting covariance between the standard liability returns and the future returns of the potential portfolio of assets.*
> Baker, col. 7, lines 8-9 (emphasis added)

Baker does not determine whether two stocks share the same risks if each of their respective spreads behave similarly given certain market factors and risks. On the other hand, Applicants do and thus they do not need to rely entirely on historical data:

> *[T]he method for determining comparability of the present invention is not dependent on historical data pertaining to the performance of the bonds in question to determine comparability, as is the case with the prior art techniques. Not requiring historical bond performance for determining*

> *comparability makes the method of the present invention especially suitable for evaluating the comparability of new bond issues or issues with little historical data. Furthermore, because the covariance matrix is constructed from market risk factors, it is simple to identify the sources of risk that cause two bonds to be comparable (or not comparable).*

Specification, pg. 13-14 (emphasis added).

Applicants discuss the disadvantages of relying solely on historical data in the Specification:

> *Although historical spread correlation is the generally accepted benchmark for determining whether two bonds are comparable, there are several problems in using such a benchmark for comparability. First, because statistical correlation is based solely on the historical performance of the bonds being compared, the results do not necessarily reflect market factors that may affect future performance of the bonds. Also, a substantial amount of accurate historical data is required to determine whether past similar behavior of two instruments is either a result of comparability or is merely a coincidence. For many bond issues, sufficient historical data is not available to reliably make this determination. In particular, for newly issued bonds there is no historical data upon which to base such a comparability determination. Furthermore, comparability based only on historical spread correlation gives no insight as to why comparable bonds move in a particular way and whether the bonds are exposed to similar risk factors.*
>
> *Accordingly, it is desirable to provide a method for identifying comparable bonds based on market risk factors.*

Specification, pg. 2-3.

Hence Baker's method and Applicants' method rely on different principles. Applicants respectfully submit that Baker's method does not overcome the disadvantages of the prior art.

For at least the foregoing reasons, Baker does not anticipate claim 31. Claims 32-34 and 37 depend from independent claim 31, and define further features and steps of the method. Accordingly, these claims are patentable for at least same the reasons noted above with respect to claim 31, as well as for the additional features recited therein.

For at least the foregoing reasons, Applicants respectfully request that the Office withdraw the 35 U.S.C. 102(e) rejection of claims 31-34 and 37. Notice to the effect that claims 31-34 and 37 are in condition for immediate allowance is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 1-30, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker, U.S. Patent No. 6,336,103.

Regarding to claim 1, Baker discloses method for determining the comparability of at least two stocks, wherein said method is implemented with a computer system comprising one ore more computer processors, said method comprising the steps of:

> **identifying with one of said one or more computer processors a plurality of factors associated with said at least two stocks (column 7, lines 30-40, the returns for each security in the prior periods, market capitalization, trading volume, recent prices, specific identifiers and estimated bi/ask price spreads);**
>
> **determining with one of said one or more computer processors a value for each of said plurality of factors for each of said at least two stocks (column 7, lines 48-63, a maximum and minimum percentage weight of the portfolio for each security can be specified to constrain the portfolio);**
>
> **forming with one of said one or more computer processors a covariance matrix, said covariance matrix including a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed to said corresponding one of said plurality of factors (figures 1A-1E3 and column 7, line 63-column 8, lines 35, calculating the covariance of each security with the target index);**
>
> **determining with one of said one or more computer processors the comparability of said at least two stocks based on said values for each of said at least two stocks and said covariance matrix (column 5, line 65-column 6, line 65, determining the covariance of stock 1 with stock 2),**
>
> **Baker does not disclose comparing two bonds. However, bond is a well-known financial instrument. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Baker's to adopt the teaching of Baker for comparing two bonds, for the purpose of providing more efficiency in comparing two bonds.**

Office Action, pg. 6-7.

Applicants respectfully traverse the 35 U.S.C. 103(a) rejection for at least the reason that the Final Office Action has not been established a *prima facie* case of obviousness (see MPEP § 2142).

Applicants respectfully submit that a *prima facie* case of obviousness has not been established because (a) even if Baker was modified, it does not describe or suggest all of the claimed limitations of at least independent claims 1, 9, 11, 12 and 20; and (b) there is no motivation to modify the teachings of Baker.

(a) Even if Baker was modified, it does not describe or suggest all of the claimed limitations of the present invention:

The rationale presented by Applicants above to traverse the 35 U.S.C. 102(e) rejection of claim 31 applies to the traversal of the 35 U.S.C. 103(a) rejection of claims 1, 9, 11, 12 and 20.

Further, Applicants agree with the statement in the Office Action that Baker does not provide any teachings directed comparing two bonds.

(b) There is no motivation to modify Baker's teachings:

The Office Action has provided the following arguments to support the statement that it would have been obvious to a person of ordinary skill in the art to modify Baker:

> **Baker does not disclose comparing two bonds. However, bond is a well-known financial instrument. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Baker's to adopt the teaching of Baker for comparing two bonds, for the purpose of providing more efficiency in comparing two bonds.**
> Office Action, pg. 7.

Applicants respectfully disagree with the statement that "it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Baker's to adopt the teaching of Baker for comparing two bonds, for the purpose of providing more efficiency in comparing two bonds". As discussed earlier, Baker is not concerned with a method of determining the comparability of at least two bonds. Baker is concerned with selecting a portfolio of assets that achieve an optimum correlation of asset return to a selected standard financial index.

Not only is the field of Baker's invention different from Applicants', but so is the method used. As stated earlier if Baker were to be modified according to the principle of Applicants' invention, the modification would change its principle of operation. According to the MPEP § 2143.01 (VI), if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious.

Thus, if faced with the problem of determining the comparability of two bonds without solely relying on historical data, one of skill in the art would not resort to Baker as a source of guidance. Moreover, even if one of skill in the art did resort to Baker, there would be no disclosure whether modified or not, to arrive at Applicants' claimed invention.

For at least the foregoing reasons, Applicants respectfully submit that Baker does not render Applicants' claim 1 obvious. Applicants respectfully request that the Office withdraw the 35 U.S.C. 103(a) rejection of claim 1. Notice to the effect that claim 1 is in condition for immediate allowance is respectfully requested.

> **Claim 9 contains similar limitations found in claim 1 above, therefore, is rejected by the same rationale.**

Office Action, pg. 8.

Applicants respectfully submit that to the extent claim 9 is rejected with the same rationale as claim 1, Applicants respectfully submit that claim 9 is not obvious and therefore patentable for at least same the reasons noted above with respect to claim 1.

In addition, Applicants respectfully submit that the Office Action does not provide evidence showing that Baker discloses or refers to at least a "primary bond." Applicants respectfully submit that the Office Action states that claim 9 contains "similar limitations" found in claim 1, but it but does not provide any explanation as to why Baker renders claim 9 obvious. Applicants respectfully submit that the Office Action does not "clearly explain" to Applicants the "pertinence" of the cited prior art (see MPEP § 707, § 707.05, § 707.07(f)-(g)).

Hence, Applicants hereby respectfully request that a more detailed action on the rejection of claim 9 is provided addressing all claim limitations involved, or that the claim rejection be withdrawn.

> **Claim 11 contains similar limitations found in claim 1 above, therefore, is rejected by the same rationale.**

Office Action, pg. 9.

Applicants respectfully submit that to the extent claim 11 is rejected with the same rationale as claim 1, Applicants respectfully submit that claim 11 is not obvious and therefore patentable for at least same the reasons noted above with respect to claim 1.

In addition, Applicants respectfully submit that the Office Action does not provide evidence showing that Baker discloses or refers to at least determining the comparability between said portfolio of bonds and said index of bonds based on said values for said portfolio of bonds, said values for index of bonds and said covariance matrix. Applicants respectfully submit that the Final Office Action states that claim 11 contains "similar limitations" found in claim 1, but it does not provide further explanation as to why Baker renders claim 11 obvious. Applicants respectfully submit that the Office Action does not "clearly explain" to Applicants the "pertinence" of the cited prior art (see MPEP § 707, § 707.05, § 707.07(f)-(g)).

> **Claims 12-19 contain similar limitations found in claims 1-8 above, therefore, are rejected by the same rationale.**

Office Action, pg. 9.

Applicants respectfully traverse this rejection for at least reasons provided earlier with respect to the claim limitations shared with claim 1. In addition, Applicants further submit that claims 17-18 have been canceled.

> **Claims 20-29 are written in apparatus and contain similar limitations found in claims 1-8 above, therefore, are rejected by the same rationale.**

Office Action, pg. 9.

Applicants respectfully submit that to the extent claim 20 is rejected with the same rationale as claim 1, Applicants respectfully submit that claim 20 is not obvious and therefore patentable for at least same the reasons noted above with respect to claim 1. Applicants further submit that claims 25-26 have been canceled.

In addition, Applicants respectfully submit that the Office Action has not provided evidence showing that Baker discloses or refers to at least "a factor vector generator," "a covariance matrix generator," and "a comparability calculator." Applicants respectfully submit that the Office Action states that claims 20-29 contain "similar limitations" found in claims 1-8, but it does not provide further explanation as to why Baker renders claims 20-29 obvious. Applicants respectfully submit that the Office Action does not "clearly explain" to Applicants the "pertinence" of the cited prior art (see MPEP § 707, § 707.05, § 707.07(f)-(g)).

Applicants respectfully submit that for at least the foregoing reasons, the Office Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to be obvious in light of the teachings of the prior art references (see MPEP § 2142).

Hence, Applicants respectfully submit that at least independent claims 1, 9, 11, 12, 20 and 31 are distinguishable over Baker and notice to the effect that the pending independent claims are in condition for immediate allowance is respectfully requested.

Claims 2-5 and 8 depend directly or indirectly from independent claim 1, claim 10 depends from claim 9, claims 13-16 and 19 depend directly or indirectly from claim 12, and claims 21-24 and 27-30 depend directly or indirectly from claim 20, respectively, and define further features and steps of the method, system or program code. Accordingly, these claims are patentable for at least the reasons noted above with respect to claims 1, 9, 11, 12 and 20 as well as for the additional features recited therein. Notice to the effect that dependent claims 2-5, 8, 13-16, 19, 21-24 and 27-30 are in condition for immediate allowance is respectfully requested. Claims 6-7, 17-18, 25-26 and 35-36 have been cancelled.

Claim Amendment

Applicants respectfully submit that claims 1, 9-12, 20 and 31 have been amended with the purpose of providing claim language that the Office may consider to be more suitable to define the invention, and in the interest of expediting the prosecution of the application. No new matter has been added.

CONCLUSION

Claims 1, 9-12, 20 and 31 have been amended. Claims 6-7, 17-18, 25-26 and 35-36 have been cancelled. Claims 1-5, 8-16, 19-24, 27-34 and 37 are now pending in this application. For the reasons set forth above, allowance of this application is courteously urged. The Examiner is respectfully requested to reconsider the application at an early date with a view towards issuing a favorable action thereon. If there remain any questions regarding the present application or any of the cited references, or if the Examiner has any further suggestions for expediting allowance of the present application, the Examiner is cordially requested to contact the undersigned at (212) 589-4611 in order for the undersigned to arrange for an interview with the Examiner.

The Commissioner is authorized to charge and fees required in connection with this submission to Deposit Account No. 50-4581.

Respectfully submitted,

Date: June 17, 2009

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